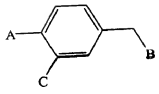
WHAT IS CLAIMED IS:

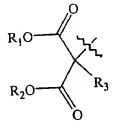
1. A compound of formula I:



(I),

wherein:

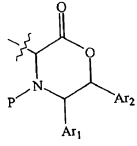
A is carboxyl, carboxyalkyl, dicarboxyalkyl, alkoxycarbonyl, alkoxycarbonylalkyl, dialkoxycarbonylalkyl, or a malonyl group of formula II:



(II),

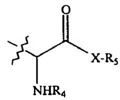
wherein R_1 and R_2 may be the same or different and are selected from the group consisting of hydrogen, alkyl, aryl, arylalkyl, alkylaryl, and heteroaryl; and R_3 is selected from the group consisting of hydrogen, halo, hydroxy, amino, alkyl, aryl, and alkoxy;

B has the formula III:



(III),

wherein P is an amine protective group; and Ar_1 and Ar_2 are aryl groups; or the formula IV:



(IV),

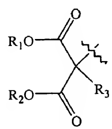
wherein X is NH or O; R_4 is hydrogen, alkyl, aryl, alkylaryl, arylalkyl, or an amine protective group; and R_5 is selected from the group consisting of hydrogen, alkyl, aryl, arylalkyl, alkylaryl, and heteroaryl; and

C is selected from the group consisting of hydrogen, hydroxyl, alkyl, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, and alkoxycarbonyl alkyl;

wherein said aryl, heteroaryl, and the aryl portion of said arylalkyl and alkylaryl may be unsubstituted or substituted with a substituent selected from the group consisting of alkyl, hydroxy, halo, keto, amino, and alkoxy; with the provisos that (i) R_5 is not hydrogen when A is carboxyl or carboxyalkyl, C is hydrogen, B has the formula IV wherein R_4 is hydrogen or alkylcarbonyl, and X is NH; and (ii) R_5 is not hydrogen or alkyl when A is carboxyl or carboxyalkyl, C is hydrogen or hydroxy, B has the formula IV wherein R_4 is hydrogen or alkylcarbonyl, and X is O.

2. The compound of claim 1, wherein:

A is carboxyl, carboxyl C_1-C_6 alkyl, dicarboxy C_1-C_6 alkyl, C_1-C_6 alkoxycarbonyl, C_1-C_6 alkoxycarbonyl C_1-C_6 alkyl, C_1-C_6 dialkoxycarbonyl C_1-C_6 alkyl, or a malonyl group of formula II:

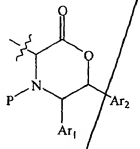


(II),

wherein R_1 and R_2 may be the same or different and are selected from the group consisting of hydrogen, C_1-C_6 alkyl, aryl, aryl C_1-C_6 alkyl, C_1-C_6

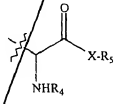
alkylaryl, and heteroaryl; and R_3 is selected from the group consisting of hydrogen, halo, hydroxy, amino, C_1-C_6 alkyl, aryl, and C_1-C_6 alkoxy;

B has the formula III:



(III)

wherein P is an amine protective group; and Ar_1 and Ar_2 are aryl groups; or B has the formula IV:



(IV),

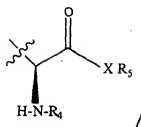
wherein X is NH or O; R_4 is hydrogen, C_1-C_6 alkyl, aryl, C_1-C_6 alkylaryl, aryl C_1-C_6 alkyl, or an amine protective group; and R_5 is selected from the group consisting of hydrogen, C_1-C_6 alkyl, aryl, aryl C_1-C_6 alkyl, C_1-C_6 alkylaryl, and heteroaryl; and

C is selected from the group consisting of hydrogen, hydroxyl, C_1-C_6 alkyl, C_1-C_6 alkylcarbonyl, C_1-C_6 alkylcarbonyloxy, C_1-C_6 alkoxycarbonyl, and C_1-C_6 alkoxycarbonyl C_1-C_6 alkyl; wherein said aryl, heteroaryl, and the aryl portion of said arylalkyl and alkylaryl may be unsubstituted or substituted with a substituent selected from the group consisting of C_1-C_6 alkyl, hydroxy, halo, keto, amino, and C_1-C_6 alkoxy.

3. The compound of claim 2, wherein B has the formula IV.

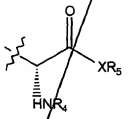
4. The compound of claim 3, wherein B has the formula:

Sub A3



wherein X is NH or O; R_4 is hydrogen, C_1-C_6 alkyl, aryl, C_1-C_6 alkylaryl, aryl C_1-C_6 alkyl, or an amine protective group; and R_5 is selected from the group consisting of hydrogen, C_1-C_6 alkyl, aryl, aryl C_1-C_6 alkyl, C_1-C_6 alkylaryl, and heteroaryl.

5. The compound of claim 3, wherein B has the formula:



wherein X is NH or O; R_4 is hydrogen, C_1-C_6 alkyl, aryl, C_1-C_6 alkylaryl, aryl C_1-C_6 alkyl, or an amine protective group; and R_5 is selected from the group consisting of hydrogen, C_1-C_6 alkyl, aryl, aryl C_1-C_6 alkyl, C_1-C_6 alkylaryl, and heteroaryl.

6. The compound of claim 4 or 5, wherein X is O.

7. The compound of claim 6, wherein R_4 is hydrogen.

8. The compound of claim 6, wherein R_4 is an amine protecting group.

9. The compound of claim 8, wherein acid amine protecting group is selected from the group consisting of fluorenylmethoxycarbonyl, tert-butoxycarbonyl, carbobenzoxy, and carbamoyl.

10. The compound of claim 8, wherein R_5 is hydrogen.

11. The compound of any of claims 4-10, wherein R_1 and R_2 are hydrogen.

12. The compound of claim 11, wherein R_3 is hydrogen.

13. The compound of any of claims 4-12, wherein C is hydrogen.

14. The compound of any of claims 4-12, wherein C is C_1-C_6 alkylcarbonyl.

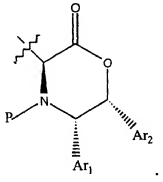
15. The compound of any of claim 4-12 and 14, wherein C is tert-butoxycarbonyl.

16. The compound of any of claims 4-12, wherein C is C_1-C_6 alkylcarbonyloxy.

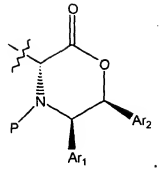
17. The compound of any of claims 4-12 and 16, wherein C is acetyloxy.

18. The compound of claim 1 or 2, wherein B has the formula III.

19. The compound of claim 18, wherein B has the formula:



20. The compound of claim 18, wherein B has the formula:

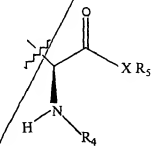


21. The compound of claim 19 or 20, wherein Ar_1 and Ar_2 are phenyl.

22. The compound of any of claims 18-21, wherein said amine protecting group is selected from the group consisting of fluorenylmethoxycarbonyl, tert-butoxy carbonyl, carbobenzoxy, and carbamoyl.

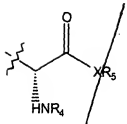
23. The compound of claim 9 or 22, wherein said amine protecting group is fluorenylmethoxycarbonyl.

24. The compound of claim 1 or 2, wherein R_1 and R_2 are tert-butyl and R_3 is hydrogen, and B has the formula



wherein X is O, R_4 is fluorenylmethoxycarbonyl, and R_5 is hydrogen.

25. The compound of claim 1 or 2, wherein R_1 and R_2 are tert-butyl, and R_3 is hydrogen; and B has the formula



wherein R_4 is fluorenylmethoxycarbonyl.

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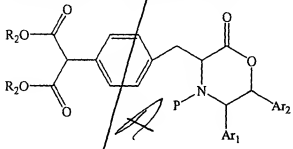
25. A process for the preparation of a compound of formula VII:



(VII),

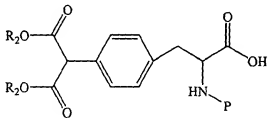
wherein R_2 is alkyl, P is an amine protecting group, and Ar_1 and Ar_2 are aryl; the process comprising:

(a) converting a p-halotoluene to a p-tolyl-malonic acid dialkyl ester by contacting the p-halotoluene with a dialkylmalonate and a cuprous halide;

(b) halogenating the p-tolyl-malonic acid dialkyl ester to obtain a (4-halomethylphenyl)-malonic acid dialkyl ester; and

(c) contacting the (4-halomethylphenyl)-malonic acid dialkyl ester with a benzyl-6-oxo-2,3-diaryl-4-morpholine to obtain the compound of formula VII.

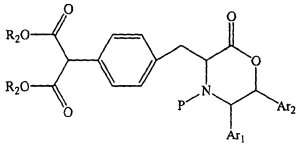
26. A process for preparing a compound of formula VIII:



(VIII),

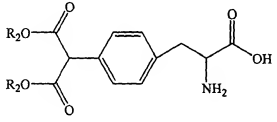
wherein R_2 is alkyl and P is an amine protecting group; the process comprising:

(a) reducing the compound of formula



(VII),

to obtain a compound of formula IX:

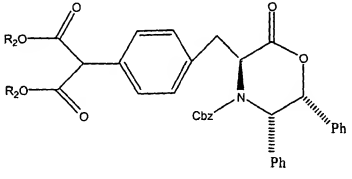


(IX);

and

(b) reacting the compound of formula IX with an amine protecting agent to obtain the compound of formula VIII.

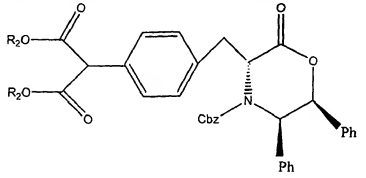
27. The process of claim 26, wherein the compound of formula VII is:



(VIIa)

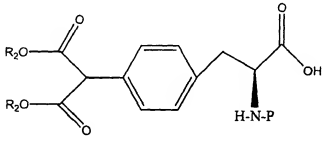
wherein said benzyl-6-oxo-2,3-diphenyl-4-morpholine is benzyl (2R,3S)- (-) - 6-oxo-2,3-diphenyl-4-morpholine.

19 17
~~28~~. The process of claim ~~28~~, wherein the compound of formula VII is:



(VIIb)

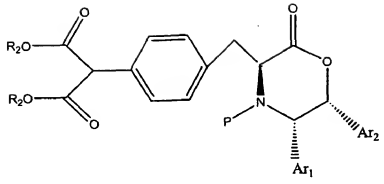
30
~~29~~. A process for preparing a compound of formula VIIIa:



(VIIIa)

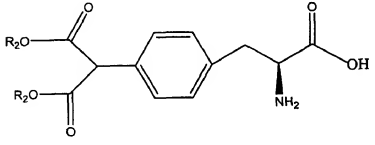
wherein R_2 is alkyl and P is an amine protecting group; the process comprising:

(a) reducing a compound of formula VII



(VIIa)

to obtain a compound of formula IXa:

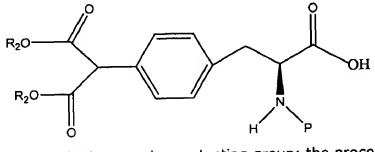


(IXa);

and

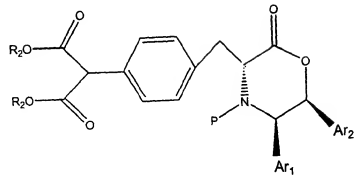
(b) reacting the compound of formula IXa with an amine protecting agent to obtain the compound of formula VIII.

~~30~~. A process for preparing a compound of the formula:

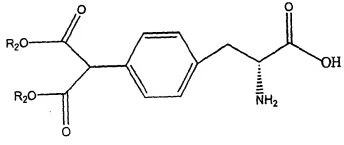


wherein R_2 is alkyl and P is an amine protecting group; the process comprising:

(a) reducing a compound of formula:



to obtain a compound of formula IXb:



(IXb);

and (b) reacting the compound of formula IXa with an amine protecting agent to obtain the compound of formula VIII.

31. The process of claim 27, wherein said p-halotoluene is p-iodotoluene.

32. The process of claim 27, wherein said (4-halomethylphenyl)-malonic acid dialkyl is (4-bromomethylphenyl)-malonic acid dialkyl ester.

33. The process of any of claims 27-32, wherein R_2 is t-butyl.

34. A conjugate comprising a conjugant covalently linked to a compound of any of claims 1-25.

35. The conjugate of claim 34, wherein said conjugant is an amino acid or a polypeptide.

37
~~36~~. The conjugate of claim ~~34~~, wherein said conjugant is a nucleic acid or a nucleotide.

38
~~37~~. The conjugate of claim ~~34~~, wherein said conjugant is a polymer.

39
~~38~~. A compound of the formula:

$$W\text{-}Y\text{-}(AA)_n\text{-}Z$$

wherein n is 0 to 15;

Y is a phenylalanyl radical having a phenyl ring, an amine end, and a carboxyl end, the phenyl ring having one or more substituents selected from the group consisting of hydroxyl, carboxyl, formyl, carboxyalkyl, carboxyalkyloxy, dicarboxyalkyl, dicarboxyalkyloxy, dicarboxyhaloalkyl, dicarboxyhaloalkyloxy, and phosphonoalkyl, phosphonohaloalkyl, wherein the alkyl portion of the substituents may be unsubstituted or substituted with a substituent selected from the group consisting of halo, hydroxy, carboxyl, amino, aminoalkyl, alkyl, alkoxy, and keto;

W is a moiety attached to the nitrogen of Y and is selected from the group consisting of alkylcarbonyl, oxalyl, alkylaminooxalyl, arylaminooxalyl, arylalkylaminooxalyl, alkoxyoxalyl, carboxyalkyl carbonyl, heterocyclyl carbonyl, heterocyclylalkyl carbonyl, arylalkyl heterocyclylalkyl carbonyl, aryloxycarbonyl, and arylalkoxycarbonyl, wherein the aryl and alkyl portions of the substituents may be unsubstituted or substituted with a substituent selected from the group consisting of halo, hydroxy, carboxyl, amino, aminoalkyl, alkyl, alkoxy, and keto; and the heterocyclyl portion of W contains at least 4 hetero atoms selected from the group consisting of O, N, and S;

AA is an amino acid, the amine end of which is attached to the carboxyl end of Y; and

Z is an arylalkylamino or arylheterocyclyl alkylamino;

or a salt thereof;

with the proviso that W is not arylalkylamino when the phenyl ring of phenylalanyl contains a phosphonoalkyl or phosphonohaloalkyl substituent at a position para to the alkylamido group and the ortho and meta positions are unsubstituted.

40C

~~39~~. The compound of claim ~~38~~, wherein n is 0 to 15;

Y is a phenylalanyl radical having a phenyl ring, an amine end, and a carboxyl end, the phenyl ring having one or more substituents selected from the group consisting of hydroxyl, carboxyl, formyl, carboxy C_1-C_6 alkyl, carboxy C_1-C_6 alkyloxy, dicarboxy C_1-C_6 alkyl, dicarboxy C_1-C_6 alkyloxy, dicarboxyhalo C_1-C_6 alkyl, dicarboxyhalo C_1-C_6 alkyloxy, and phosphono C_1-C_6 alkyl, phosphonohalo C_1-C_6 alkyl, wherein the alkyl portion of the substituents may be unsubstituted or substituted with a substituent selected from the group consisting of halo, hydroxy, carboxyl, amino, aminoalkyl, C_1-C_6 alkyl, C_1-C_6 alkoxy, and keto;

W is a moiety attached to the nitrogen of Y and is selected from the group consisting of C_1-C_6 alkylcarbonyl, oxalyl, C_1-C_6 alkylaminooxalyl, arylaminooxalyl, aryl C_1-C_6 alkylaminooxalyl, C_1-C_6 alkoxyoxalyl, carboxy C_1-C_6 alkyl carbonyl, heterocyclyl carbonyl, heterocyclyl C_1-C_6 alkyl carbonyl, aryl C_1-C_6 alkyl heterocyclyl C_1-C_6 alkyl carbonyl, aryloxycarbonyl, and aryl C_1-C_6 alkoxycarbonyl, wherein the aryl and alkyl portions of the substituents may be unsubstituted or substituted with a substituent selected from the group consisting of halo, hydroxy, carboxyl, amino, amino C_1-C_6 alkyl, C_1-C_6 alkyl, C_1-C_6 alkoxy, and keto; and the heterocyclyl portion of W contains at least 4 hetero atoms selected from the group consisting of O, N, and S;

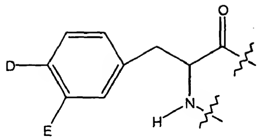
AA is an amino acid, the amine end of which is attached to the carboxyl end of Y; and

Z is an aryl C_1-C_6 alkylamino or arylheterocyclyl C_1-C_6 alkylamino;

or a salt thereof.

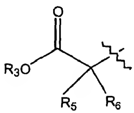
41

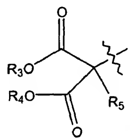
~~40~~. The compound of claim ~~38~~, wherein Y is of the formula XI:

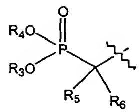


(XI)

wherein D has the formula XII, XIII, or XIV:







(XII) (XIII) (XIV)

wherein R_3 and R_4 may be the same or different and are selected from the group consisting of hydrogen, C_1-C_6 alkyl, aryl, aryl C_1-C_6 alkyl, C_1-C_6 alkaryl, and heteroaryl; and R_5 and R_6 may be the same or different and are selected from the group consisting of hydrogen, halo, hydroxy, amino, and C_1-C_6 alkoxy; and

E is selected from the group consisting of hydrogen, C_1-C_6 alkyl, C_1-C_6 alkylcarbonyl, carboxyl, and C_1-C_6 alkylcarbonyl C_1-C_6 alkyl.

42 ~~41~~. The compound of claim ~~40~~, wherein D is of formula XII.

43 ~~42~~. The compound of claim ~~40~~, wherein D is of formula XIII.

Sub A7

44 ~~43~~. The compound of claim ~~40~~, wherein D is of formula XIV.

45 ~~44~~. The compound of any of claims ~~41-43~~, wherein E is hydrogen.

Sub A8

46 ~~45~~. The compound of claim ~~41~~, wherein E is carboxyl.

47
~~46~~. The compound of any of claim ~~41-45~~, wherein R_3, R_4, R_5, and R_6 are hydrogen.

Sub A9

48
~~47~~. The compound of claim ~~43~~, wherein R_3 and R_4 are hydrogen.

49
~~48~~. The compound of any of claims ~~38-47~~, wherein W is selected from the group consisting of C_1-C_6 alkylcarbonyl, oxalyl, C_1-C_6 alkylaminooxalyl, arylaminooxalyl, aryl C_1-C_6 alkylaminooxalyl, C_1-C_6 alkoxyoxalyl, carboxy C_1-C_6 alkyl carbonyl, heterocyclyl carbonyl, heterocyclyl C_1-C_6 alkyl carbonyl, aryl C_1-C_6 alkyl heterocyclyl C_1-C_6 alkyl carbonyl, aryloxycarbonyl, and aryl C_1-C_6 alkoxycarbonyl, wherein the aryl and alkyl portions of the substituents may be unsubstituted or substituted with a substituent selected from the group consisting of halo, hydroxy, carboxyl, amino, amino C_1-C_6 alkyl, C_1-C_6 alkyl, C_1-C_6 alkoxy, and keto; and the heterocyclyl portion of W contains at least 4 hetero atoms selected from the group consisting of O, N, and S.

50
~~49~~. The compound of any of claims ~~38-48~~, wherein W is C_1-C_6 alkyloxycarbonyl.

51
~~50~~. The compound of any of claims ~~38-49~~, wherein W is acetyl.

52
~~51~~. The compound of any of claims ~~38-48~~, wherein W is oxalyl.

53
~~52~~. The compound of any of claims ~~38-48~~, wherein W is carboxymethylcarbonyl.

54
~~53~~. The compound of any of claims ~~38-48~~, wherein W is tetrazolylcarbonyl.

55
~~54~~. The compound of any of claims ~~38-48~~, wherein W is tetrazolylmethylcarbonyl.

56
~~55~~. The compound of any of claims ~~38-48~~, wherein W is an arylmethyloxycarbonyl.

57
56. The compound of any of claims 38-48 and 55, wherein W is an aminophenylmethyloxycarbonyl.

58
57. The compound of any of claims 38-48 and 55-56, wherein W is 3-aminophenyl-1-methyloxycarbonyl.

59
58. The compound of any of claims 38-48, wherein W is an aryloxycarbonyl.

60
59. The compound of any of claims 38-48 and 58, wherein W is an naphthyloxycarbonyl.

61
60. The compound of any of claims 38-48 and 58-59, wherein W is an aminonaphthyloxycarbonyl.

62
61. The compound of any of claims 38-48 and 58-60, wherein W is 6-amino-1-naphthyloxycarbonyl.

63
62. The compound of any of claims 38-48, wherein W is an arylmethyltetrazolylmethylcarbonyl.

64
63. The compound of any of claims 38-48 and 62, wherein W is a phenylmethyltetrazolylmethylcarbonyl.

65
64. The compound of any of claims 38-48 and 62-63, wherein W is an alkoxyphenylmethyltetrazolylmethylcarbonyl.

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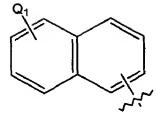
66
65. The compound of any of claims 38-48 and 62-64, wherein W is a methoxyphenylmethyltetrazolylmethylcarbonyl.

67
66. The compound of any of claims 38-65, wherein Z is aryl C_1-C_6 alkylamino.

68
67. The compound of claim 66, wherein the aryl portion of Z has the formula:



wherein Q_1 is hydrogen or a substituent selected from the group consisting of hydroxyl, halo, C_1-C_6 alkyl, C_1-C_6 alkoxy, amino, and C_1-C_6 acylamino.

69
~~68~~. The compound of claim 67, wherein the aryl portion of Z is attached to the alkylamino portion of Z at the aryl 1- or 2- position.

70
~~69~~. The compound of claim 67 or 68, wherein Q_1 is methyl.

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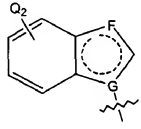
71
~~70~~. The compound of any of claims 67-69, wherein Z is naphthylpropylamino.

72
~~71~~. The compound of any of claims 38-65, wherein Z is aryl heterocyclyl C_1-C_6 alkylamino.

73
~~72~~. The compound of claim 71, wherein the heterocyclyl portion of Z has the formula:



wherein Q_2 is hydrogen or a substituent selected from the group consisting of hydroxyl, halo, C_1-C_6 alkyl, C_1-C_6 alkoxy, amino, and C_1-C_6 acylamino, and F and G are independently selected from the group consisting of C, N, O, and S.

74
~~73~~. The compound of claim 72, wherein F is C and G is N.

74. The compound of claim 72 or 73, wherein Q_2 is methyl.

75. The compound of any of claims 38-39, wherein W is selected from the group consisting of acetyl, oxalyl, C_1-C_6 alkylaminooxalyl, arylaminooxalyl, aryl C_1-C_6 alkylaminooxalyl, C_1-C_6 alkoxyoxalyl, carboxymethylcarbonyl, tetrazolylcarbonyl, tetrazolylmethylcarbonyl, aminophenylmethoxycarbonyl, amino naphthyloxycarbonyl, and methoxyphenylmethyl tetrazolylmethylcarbonyl.

76. The compound of any of claims 38-75, wherein n is 1-3.

77. The compound of any of claims 38-76, wherein said amino acid is selected from the group consisting of glycine, alanine, valine, norvaline, leucine, iso-leucine, norleucine, α-amino n-decanoic acid, serine, homoserine, threonine, methionine, cysteine, S-acetylaminomethyl-cysteine, proline, trans-3- and trans-4-hydroxyproline, phenylalanine, tyrosine, 4-aminophenylalanine, 4-nitrophenylalanine, 4-chlorophenylalanine, 4-carboxyphenylalanine, β-phenylserine β-hydroxyphenylalanine, phenylglycine, α-naphthylalanine, cyclohexylalanine, cyclohexylglycine, tryptophan, indoline-2-carboxylic acid, 1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, aspartic acid, asparagine, aminomalonic acid, aminomalonic acid monoamide, glutamic acid, glutamine, histidine, arginine, lysine, N'-benzyl-N'-methyl-lysine, N',N'-dibenzyl-lysine, 6-hydroxylysine, ornithine, α-aminocyclopentane carboxylic acid, α-aminocyclohexane carboxylic acid, α-aminocycloheptane carboxylic acid, α-(2-amino-2-norbornane)-carboxylic acid, α,γ-diaminobutyric acid and α,β-diaminopropionic acid, homophenylalanine, and α-tert-butylglycine.

78. The compound of claim 77, wherein said amino acid is selected from the group consisting of glycine, alanine, leucine, iso-leucine, norleucine, cyclohexylalanine, 4-aminocyclohexylglycine, 4-acetylaminocyclohexylglycine, aspartic acid, asparagine, glutamic acid, and glutamine.

79. The compound of any of claims 76-78, wherein n is 2.

80. The compound of claim 79, comprising a first amino acid (AA_1) attached to the phenyl alanine moiety and asparagine attached to said AA_1, wherein said AA_1 is selected from the group consisting of cyclohexylglycine, 4-aminocyclohexylglycine, and 4-acetylaminocyclohexylglycine.

81. The compound of claim 80, wherein said AA_1 is cyclohexylglycine.

82. The compound of claim 81, wherein D is of formula XIII, E, R_3, R_4, and R_5 are hydrogen, R_1 is oxalyl, and Z is naphthylpropylamino.

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83. The compound of claim 38 or 39, wherein Z is not indolylpropylamino when W is acetyl, and Y is a phenylalanyl radical having a phosphonomethyl substituent.

84. A composition comprising a pharmacologically acceptable carrier and a compound of any of claims 38-83.

85. A method for inhibiting an SH2 domain from binding with a phosphoprotein comprising contacting an SH2 domain with a compound of any of claims 34-83.

86. The method of claim 85, wherein said SH2 domain is in a mammal, and said compound is administered to said mammal.

87. The use of a compound of any of claims 34-83 in the manufacture of a medicament for the treatment of a condition that responds to the inhibition of phosphoprotein binding to an SH2 domain of a mammal.

88. The use of a compound of any of claims 34-83 in medicine.

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89. A compound of any of claims 34-83 for use as a Grb2-SH2 domain inhibitor.

90. A method for inhibiting SH2 domain binding comprising exposing a material containing an SH2 domain to a compound of any of claims 34-83.

91. A method for determining the presence of an SH2 domain in a material comprising:

(a) exposing a sample of said material to a SH2 binding compound and obtaining a first binding result;

(b) exposing another sample of said material to a compound of any of claims 34-83 and obtaining a second binding result; and

(c) comparing the first and second binding results to determine whether an SH2 domain is present in the material.

92. A method of preventing or treating a disease, state, or condition in a mammal comprising administering a compound of any of claims 34-83.

93. The method of claim 92, wherein the disease, state, or condition involves an SH2 domain binding.

94. The method of any of claims 86, 92 or 93, wherein the mammal is afflicted with a cancer.

95. The method of claim 94, wherein the cancer is a breast cancer or ovarian cancer.

96. The method of claim 86, 92, or 93, wherein the mammal is afflicted with a tumor.

97. The method of claim 96, wherein the tumor is leukemia or lymphoma.

98. The method of claim 96, wherein the tumor is a solid tumor.

99. The method of claim 98, wherein the solid tumor is a brain tumor or a prostate tumor.

100 The method of claim 86, 92 or 93, wherein the mammal is afflicted with an autoimmune disease.

101 The method of claim 86, 92, or 93, wherein the mammal is afflicted with an inflammatory disease.

102 The method of claim 86, 92, or 93, wherein the mammal is afflicted with diabetes.

103 The method of claim 86, 92, or 93, wherein the mammal is afflicted with obesity.

104 The method of claim 86, 92, 93, wherein the mammal is afflicted with a metabolic disease.

105 The method of claim 86, 92, or 93, wherein the mammal is afflicted with a cardiovascular disease.

106 A method of enhancing the therapeutic effect of a treatment rendered to a mammal that has been afflicted with a disease, state, or condition, comprising administering to the mammal a compound of any of claims 34-83 in conjunction with the treatment.

107 The method of claim 106, wherein the treatment comprises chemotherapy, radiation therapy, or biological therapy.

108 The method of claim 107, wherein the biological therapy comprises the use of a protein.

109 The method of claim 106 or 107, wherein the biological therapy comprises the use of an antibody or a recombinant protein.

110 The method of any of claims 106-109, which comprises inhibiting a cell survival factor in the mammal.

111. The method of any of claims 106-109, which comprises triggering cell apoptosis.

112. A method of inhibiting the MAP kinase activity in a mammal comprising administering to the mammal a compound of any of claims 34-83.

113. The method of claim 94, wherein the cancer is mediated through BCR-Abl.

114. The method of claim 92 or 93, which involves inhibiting the expression of erbB-2 receptor.